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May 17, 2018

Ms. Carolyn d'Almeida
Remedial Project Manager
Federal Facilities Branch (SFD 8-1)
US EPA Region 9 Laboratory
1337 South 46th Street, Building 201
Richmond, CA 94804

Subject: Contract No. EP-W-07-066, Task Order No 066-016-09Q1, Williams Air Force Base Task Order, Review of Appendices F and H of the Resubmitted Final Pilot Study Implementation Work Plan for Operable Unit 2, Revised Groundwater Remedy, Site ST012, Former Williams Air Force Base, Mesa, Arizona, April 2018

Dear Ms. d'Almeida:

TechLaw conducted a technical review of Appendices F and H of the Resubmitted Final Pilot Study Implementation Work Plan for Operable Unit 2, Revised Groundwater Remedy, Site ST012, Former Williams Air Force Base, Mesa, Arizona (the Pilot Study WP), dated April 5, 2018.

The comments are forwarded to you in Word format. TechLaw understands you will review and revise these comments at your discretion.

We appreciate the opportunity to provide technical support services to U.S. EPA on this Task Order. Should you have any questions or comments, please contact me or the TechLaw Project Manager, Nicole Goers, at (540) 836-0420.
Sincerely,

A handwritten signature in black ink, appearing to read 'Indira D. Balkissoon'.

Indira Balkissoon
ROC 9 Senior Task Order Manager

KB:NG:IB:as

cc: Central files, TechLaw, Inc.

**FORMER WILLIAMS AIR FORCE BASE
Mesa, Arizona**

**Review of Appendices F and H of the Resubmitted Final Pilot Study Implementation Work
Plan for Operable Unit 2, Revised Groundwater Remedy, Site ST012, April 2018**

Submitted to:

**Ms. Carolyn d'Almeida
Remedial Project Manager
Federal Facilities Branch (SFD 8-1)
US EPA Region 9 Laboratory
1337 South 46th Street, Building 201
Richmond, CA 94804**

Submitted by:

**TechLaw Inc.
235 Montgomery Street
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San Francisco, California 94104**

**Task Order No.
Contract No.
EPA TOCOR
Telephone No.
TechLaw TO Manager
Telephone No.**

**066-016-09Q1
EP-W-07-066
Carolyn d'Almeida
(415) 972-3150
Nicole Goers
(540) 836-0420**

May 17, 2018

Review of Appendices F and H of the Resubmitted Final Pilot Study Implementation Work Plan for Operable Unit 2, Revised Groundwater Remedy, Site ST012, April 2018

GENERAL COMMENTS

1. Actual water level measurement data should be collected for comparison with the Groundwater Head Model Results figures in Appendix F (Figures F-31 through F-60) to validate the groundwater model. This will facilitate evaluation of the degree to which the groundwater model represents actual conditions and to track the progress of remediation. These water level measurements should be collected at the same intervals as the model figures (i.e., at 30 days, 120 days, and 7, 10, 15, 20, 25, 40, and 72 months). Figures comparing the actual and modeled heads should be provided to the Regulatory Agencies within 30 days after water level measurements to facilitate discussions about the progress of the Pilot Study and the effectiveness of the groundwater model for evaluating the Pilot Study. Please ensure that water level measurements are collected and figures comparing the actual and modeled heads are provided to the Regulatory Agencies on a regular basis.
2. The basis for some of the changes made to the groundwater model is unclear. For example, it is unclear why the modeled time periods changed. This change made it difficult to compare the previous model figures with the recently revised model figures to understand the impact of changes in sulfate injection concentrations. Similarly, the locations of some injection and extraction wells were changed, but there is no explanation for this change. Please revise the text to explain the basis for all changes to the groundwater model.

SPECIFIC COMMENT

1. **Section 3.2.2, Phased TEA Batch Injections, Page 3-6 and Appendix F, Groundwater Model Outputs, Design Flow Rate Sheet, PDF Page 184:** The text in Section 3.2.2 states, "In general, extraction wells were run continuously in the model until completion of the Phase I injections (about 330 days), with the exception of five extraction wells (ST012-CZ07, ST012-CZ18, ST012-CZ19, ST012-CZ21, and ST012-UWBZ28)," but the table in the Appendix F Constants and Inputs subsection on pdf page 184 indicates that all of the wells ran for a period of time and were cycled off after each Phase I injection period. Please resolve this discrepancy.